

MOGA, A., Acad.; OBRASCU, C., dr.; DOBO, dr.; TOMAS, Alexandrina, prof.,
ed., fiz.; BLENDEA, O, dr., si colectivul.

Study of medical physical therapy of hypertensive disease.
Med. int., Bucur. 4 no.8:1177-1181 Dec 56.

(HYPERTENSION, therapy
phys. ther.)
(PHYSICAL THERAPY, in various dis.
hypertension)

RUMANIA

NICOLAU, Cl., Conf. Dr., TOMAS, E.; OLINESCU, R.; CHRISTEA, Al., CONSTANTINESCU, Rodica; and STROESCU, Eugenia

"Activity of 2-Methyl-1, 4-Naphthoquinone Sodium Bisulfite(Vitamin K3) on Some Redox Enzymes"

Bucharest, Revista Sanitara Militara, Vol 16, Special No., 1965; pp 389-393

Abstract: In vitro studies to pinpoint mode of radiosensitizing effect of Vitamin K3 in study with ceruloplasmin, catalase, peroxidase, d-amino-acid oxidases. Results indicate that K3 vitamin has profound effect inhibiting or potentiating the enzymatic activities depending on its concentration. This is probably the mode of action of Vitamin K3 as radiosensitizer.

1/1

- 78 -

TOMAS, G.Ya., inzh.

Prospects for the wide use of floating factories in the national economy of the U.S.S.R. Stroi. dor. mash. 8 no.5:19-22 My '63.

(MIRA 16:5)

(Factories—Design and construction) (Construction industry)

ZAVALISHIN, I., inzh.; TOHAS, G., inzh.

Floating dwellings for builders. Znil. stroi. no.9:31 '64.
(MIA 17:12)

TOMAS, G. Ya.

Reinforced concrete constructions. Mashinostroitel' no.3:11-12 Mr '61.
(MIRA 14:3)

(Reinforced concrete constructions)

BRUCKNER, L.; MOSLER, J.; TOMAS, J.; CERNY, J.; BESKA, F.

X-ray picture of the urinary bladder in gynecological carcinoma.
Cesk.rentg.14 no.6:390-395 D'60.

1. Onkologické odd. KUNZ-Ostrava v Paskově, prednosta MUDr.
B. Raffersberg.
(BLADDER radiog)
(GENITALIA FEMALE neopl)

TOMAS, Jaroslav

CO-CO₂ ionization analyzer. Jaderna energie 9 no. 12: 391
D '63.

1. Katedra analytische chemie a radiochemie, Vysoka skola
banska, Ostrava.

TOMAS, Jaroslav

Development of the apparatus for measurement of thermo-dynamic constants of alloys. Jaderna energie 9 no.11:
357 '63.

1. Katedra analytische chemie a radiochemie, Vysoka skola
banska, Ostrava.

TOMAS, Jaroslav, inz.

Protection of synchronous machines in case of excitation loss.
Energetika Cz 11 no.1:36-38 Ja '61.

SLAVIK, J. B., prof., RNDr.; TOMAS, J.

The 2nd Conference on Acoustics in Budapest. Slaboproudny obzor 22
no. 12:778 D '61.

(Sound)

L 46899-66

ACC NR: AP6034285

SOURCE CODE: CZ/0034/66/000/005/0329/0333

AUTHOR: Tomas, Jindrich (Engineer)

20

B

ORG: Chair of Energetics, College of Mining, Ostrava (Katedra Energetiky, Vysoka Skola Banska)

TITLE: Some shortcomings in the operation of soaking pit furnaces

SOURCE: Hutnicke listy, v. 21, no. 5, 1966, 329-333

TOPIC TAGS: furnace, metallurgy

ABSTRACT:[Author's English summary modified]: Operation of refractory regenerators of the soaking pit furnaces is analyzed and experimental results are evaluated statistically. Part of the air heated in the regenerators is lost by cracks and holes in the lining; some escape to flue gases, and some to atmosphere. The amount lost changes during the course of the run, and in individual furnace runs. The losses result in a higher oxygen content of flue gases than the ratio corresponding to the control instruments settings. Combustion characteristics of flue gases, and their thermal properties are described. The generally used four burner system in soaking pit firing is evaluated. Orig. art. has: 11 figures and 6 tables. [JPRS: 36,867]

SUB CODE: 13 / SUBM DATE: none

Card 1/1 f.v

UDC: 621.783.224

0921 0006

TOMAS, J.

TECHNOLOGY

periodicals: POZEMNI STAVBY Vol. 7, no. 2, Feb. 1959

TOMAS, J. Building of factory chimneys. p. 64.

Monthly List of East European Accession (EEAI) LC Vol. 8, no. 5
May 1959, Unclass.

TOMAS, Jaroslav, Inz., WFINDL, Josef, prof. ins. DrSc.

Using the fast radioisotopic method for the analysis of tin
solders and for the control of coating with tin-lead alloys.
Sut listy 19 no. 6:430-432 Je '64.

1. Higher School of Mining, Ostrava.

TOMAS, Jaroslav, inz.

Earth connection of generator rotors. Energetika Cz 11 no.2:95..
98 F '61.

BRUCKNER, Ladislav; BESKA, Frantisek; MOSLER, Jiri; TOMAS, Jaroslav

The kidneys and ureters in carcinoma of the rectum and sigmoid.
Roshl. chir. 40 no.12:844-850 '61.

1. Onkologicke oddeleni KUNZ Ostrava v Paskove, prednosta MUDr,
B.Raffersberg.
(RECTUM neoplasms) (SIGMOID neoplasms)
(KIDNEY radiography) (URETER radiography)

TOMAS, Jaroslav, Inza.; PUTKA, Zdenek; KUCHAR, Frantisek, Inza.; BLAHOT, Otakar, Inza.; TEINDL, Josef, prof. Inza. Ph.D.

Use of the radioisotope method in the analysis of coatings, especially in metal coatings. Sbor. VGB Československého vědecko-technického institutu (for Teindl). Submitted June 8, 1965.

TOMAS, Jaroslav, inz.

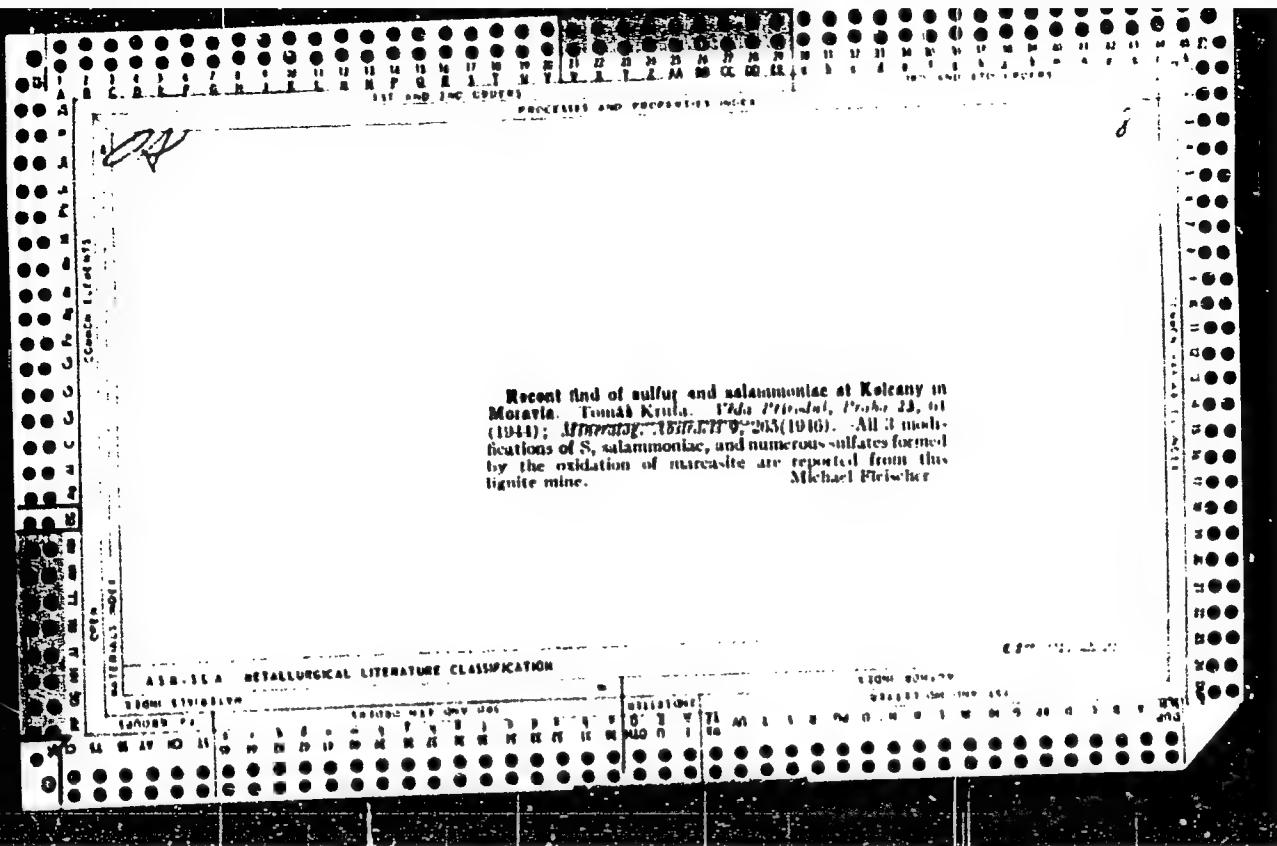
Apparatus for measuring metal tension and thermodynamic activities at high temperatures. Sbor VSB Ostrava 10 no.3: 319-327 '64.

1. Submitted June 8, 1963.

SOUKUP, Lubomir; MARTINEK, Ladislav; TOMAS, Josef, inz.

New method of manufacturing flywheel gear rims. Automobil
Cz 8 no.1:24-25 Ja '64.

1. Automobilove zavody, Mlada Boleslav.



TAYLER, D.K.; TOMAS, L.F.; SHERIDAN, D.

Comments on the article "Rotational spectrum of the cyanamide molecule. Opt. i spektr. 12 no.3:452 Mr '62. (MIRA 15:3)
(Cyanamide--Spectra) (Molecular rotation)

MITACHI, N., coresp.; ICSIF, B., coresp.; VALKAY, Geza, coresp.; TOMAS, Liviu, coresp.

In short. Constr Buc 17 nc.793:4 20 Mr '65.

VALKAI, Geza, coresp.; TOMAS, Liviu, coresp.

Balance of a trimester rich in achievements. Constr Buc 17
no.798:1 24 Ap '65.

BERGER, Vladimir; TOMAS, Michal

Urea adhesives with a low content of free formaldehyde. Drevo
19 no.6:211-214 Je '64.

1. State Research Institute of Wood, Bratislava.

TOMAS, Michal; JURIK, Ladislav

Urea-formaldehyde resins with low content of free formaldehyde.
Drevarsky vyskum no.3:171-178 '63.

1. Statny drevarsky vyskumny ustav, Bratislava.

TOMAS, O.; RUSHCHINSKIY, L.

Consolidate the planning departments, improve the planning. Mor.
flat. 24 no.8:11 Ag '64. (MIRA 18:9)

1. Nachal'nik Odesskogo porta (for Tomas). 2. Nachal'nik planovogo
otdela Odesskogo porta (for Rushchinskiy).

TOMAS, O.

Industrial potentialities within harbors to serve the seven-year plan. Mor. flot 23 no.8:12-13 Ag '63. (MIRA 16:11)

1. Nachal'nik Odesskogo porta.

TOMAS, O.

Car exchange area is a direct variant of growth potentiality.
Mdr. flot 23 no.3:8-10 Mr '63. (MIR 16:3)

1. Nachal'nik Odesskogo porta.
(Odessa—Cargo handling) (Railroads—Freight cars)

TOMAS, Petar, dr

The neutron reactions at 14 Mev.; abstract of a doctoral dissertation. Glas mat fiz Hrv 16 no.3/4:325-326 '61.

PAIC, V.; PAIC, M.; PRELEC, K.; CERINEO, M.; ILAKOVIC, K.; SLAUS, I.; TOMAS, P;
VALKOVIC, V.; LJOLJE, K.; SIPS, V.

Review of periodicals; physics. Bul sc Youg 9 no.4/5:126 Ag-0
'64.

1. Ruder Boskovic Institute, Zagreb.

ANTOLKOVIC, B. (Zagreb); PAIC, M. (Zagreb); PRELEC, K. (Zagreb);
TOMAS, P. (Zagreb); TURK, M. (Zagreb); WINTERHALTER, D. (Zagreb)

The absolute and relative measurements of neutron fluxes obtained
from the neutron generator of the Institute "Ruder Boskovic."
Ves mat fiz Srb no.12:97-101 '60.

TOMAS, Petar (Zagreb)

Production of thin films by thermal evaporation. Gl mat fiz Hrv 15
no.2:119-134 '60. (EEAI 10:9)

1. Institute "Ruder Boskovic", Zagreb.

(Evaporation) (Thin films) (Metallic films)

YUGOSLAVIA/Nuclear Physics - Installations and Instruments.
Methods of Measurement and Research

C-2

Abs Jour : Ref Zhur - Fizika, No 2, 1959, No 2599

Author : Paic M., Prelec K., Tomas P., Varicak M., Vosicki B.
Inst : -

Title : Cockcroft and Walton Accelerator for 200 kb Used to Generate
Neutrons.

Orig Pub : Glasnik mat.-fiz. i astron., 1957, 12, No 4, 269-289

Abstract : No abstract

Card : 1/1

STERNEBERG, Z.; TOMAS, P.

Excitation of helium atoms by the impact of deuterons and
rotons. Bul sc Youg 7 no.1/2:19 F-Ap '62.

1. Institut "Ruder Boskovic," Zagreb.

STIPCIC, N. (Zagreb); PAIC, M. (Zagreb); TOMAS, P. (Zagreb)

The ion optical system of a 200 kV Cockcroft-Walton accelerator.
Glas mat fiz Hrv 17 no.1/2:107-112 '62.[publ. '63].

1. Institute "Ruder Boskovic", Zagreb.

TOMAS, V. MUDr.

Work of the medical statistician in factory institutes of
national health. Cesk. zdrav. 12 no.4: 20-201 Ap'64

1. Zavodni ustav narodniho zdravi Novahut Klementa Gottwalda,
Ostrava -Kuncice.

CZECHOSLOVAKIA

TOMAS, V., Promoted Physician

ZUNZ-NHKG (ZUNZ-NHKG), Ostrava-Kuncice

Prague, Prakticky lekar, No 4, 1963, pp 153-156

"Twins of Czech History."

TOMAJ, V.

From the history of epidemics. I. Reflections on the origins of
epidemics in the 13th to the 18th centuries. Cas. lek. cesk. 103
no.32:887-888 Ag 7 '64.

1. Dilensky obvod 12 Zavodniho ustavu narodniho zdravi Novahut
Klementa Gottwalda, Ostrava-Kuncice (reditel MUDr. Z. Vich).

TOMAS, V.

On the prevention of epidemics. II. Treatment of infectious diseases
in the Middle Ages. Cas. lek. cesk. 103 no.33:920-922 14 Ag '64.

1. Dilensky obvod 12 Zavodni ustav narodniho zdravi Novahut Klementa
Gottwalda, Ostrava-Kuncice (reditel MUDr. Z. Vich).

TOMASH, Vargely [Tomas, V.] (Vengriya)

New developments in the oldest equipment, Tekh. mol. 28 no. 3:13
'60. (MIRA 14:4)
(Hungary—Grain milling machinery)

TOMAS, V., Poruba IV, 1372

Tomas Jordan (1539-1586) in the eyes of his contemporaries,
according to a commemorative medal from the year 1570. Cas.
lek, Cesk. 104 no.46:1278-1279 19 N '65.

TOMAS, Vladimir

CZECHOSLOVAKIA

Graduate physician

Not given (address: Ostrava I, Privozska 23)

Prague, Prakticky Lekar, No 21, Nov 62, p 924

"Contribution to Dr. F. Potuzil's article 'Indemnification for Psychic Accidents at Work and Other Impairment of Health" (Prakticky Lekar, No 19, 1961)

TOMAS, Vladimir

SURNAME, Given Names

(2)

Country: Czechoslovakia

Academic Degrees: Graduated Physician (Pronovany lekar)

Affiliation: Kraj Institute of Public Health (Krajsky ustav narodniho zdravi),
Ostrava V; Director: J. CERNY, MD.

Source: Prague, Prakticky Lekar, Vol 41, No 9, 1961, pp 423-426.

Data: "Development of Hospital Care in the Ostrava Area."

670 981643

TOMAS, Vladimir
SURNAME, Given Name

(2)

Country: Czechoslovakia

Academic Degrees: Graduate Physician (promovany lekar)

Affiliation: Kraj Institute of Public Health (Krajsky ustav narodniho zdraví), Ostrava; Chief (Prednosta) of the Internal Department (interni oddeleni): Dr J Cerny

Source: Prague, Praktický Lekar, Vol 41, No 17, 5 September 1961, pp 796-800

Data: "Incompetents and Quacks in the First Half of the Nineteenth Century at Ostrava."

34

000 981643

ZHUKOV, A.A., kand.tekhn.nauk; SHALASHOV, V.A., inzh.; TOMAS, V.K., inzh.

The structure of cementite. Lit. proizv. no.7:46 Ju '65.
(MIRA 18:8)

SHALASHOV, V.A.; Prinimali uchastiye: ZHUKOV, A.A.; TOMAS, V.K.

Effect of nuclear radiation on the thermodynamics of metal alloys.
Fiz. met. i metalloved. 16 no.2:278-284 Ag '63. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tekstil'nogo i
legkogo mashinostroyeniya.

(Metals, Effect of radiation on)
(Alloys—Thermodynamic properties)

TOMAS, V.

On the history of epidemics. III. Protection against infection
from the 13th to the 18th centuries. Cas. lek. cesk. 103
no. 37:1034-1036 11 S '64.

1. Dilensky obvod 12, Zavodni ustav narodniho zdravi Novahut
Klementa Gottwalda, Ostrava-Kuncice (reditel dr. Z. Vich).

TOMAS, V. (Prom. Dr.)

CZECHOSLOVAKIA

TOMAS, V., Prom. Dr.

ZUNZ-NIKG, Ostrava-Kuncice

Prague, Prakticky lekar, No 13-14, 1963, pp 552-553

"The First Czecho Women Physicians."

SHALASHOV, V.A.; Prinimali uchastiye: BREGER, A.Kh.; ZHUKOV, A.A.; GOL'DIN, V.A.; TOMAS, V.K.

Effect of irradiation on the structure and tendency to thermal decomposition of chromium cementite. Zhur.fiz.khim. 38 no.11: 2735-2737 N '64. (MIRA 18:2)

TOMAS, V.K.

Determination of iron carbide from interplanar spacings.
Zav.lab. 31 no.4:453-455 '65.

(MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tekstil'nogo
i legkogo mashinostroyeniya.

TOMAS, Y. [Thomas, J.]

Accurate method for determining the active concentration of
natural radionuclides. Atom. energ. 12 no.5:431-433 My '62.
(MIRA 15:5)

1. Institut gigiyeny truda i profzabolevaniy, Praga.
(Radioactivation analysis) (Aerosols)

TOMAS, Zdenek, inz.

Automation of ship construction in Czechoslovakia. Doprava
6 no.5:446-450 '64.

TOMAS, Z., inz.

Ten years of the Section for Water Transport of the Transport
Research Institute. Vodni hosp 13 no.1:37 '63.

TOMAS, Zdenek, inz.; KRYSL, Frantisek, inz.

The central harbor in Usti nad Labem. Doprava no. 3:88-91
'62.

CZECHOSLOVAKIA/Chemical Technology - Chemical Products and
Their Application. Synthetic and Natural Medicinal
Substances. Galenicals and Medicinal Forms.

H.

Abs Jour : Ref Zbir - Khimiya, No 10, 1959, 35992
Author : Pivoda, A., Tomsch, E.
Inst :
Title : The Application of Isotopes in the Pharmaceutical Indus-
try.
Orig Pub : Farmacia (Ceskosl.), 1958, 27, No 8, 235-240.

Abstract : The possibility of the application of isotopes for steri-
lization of drugs in ampules and for their analysis is
indicated. -- I. Matveyeva.

Card 1/1

CZECHOSLOVAKIA/Analytical Chemistry - Analysis of Inorganic Substances.

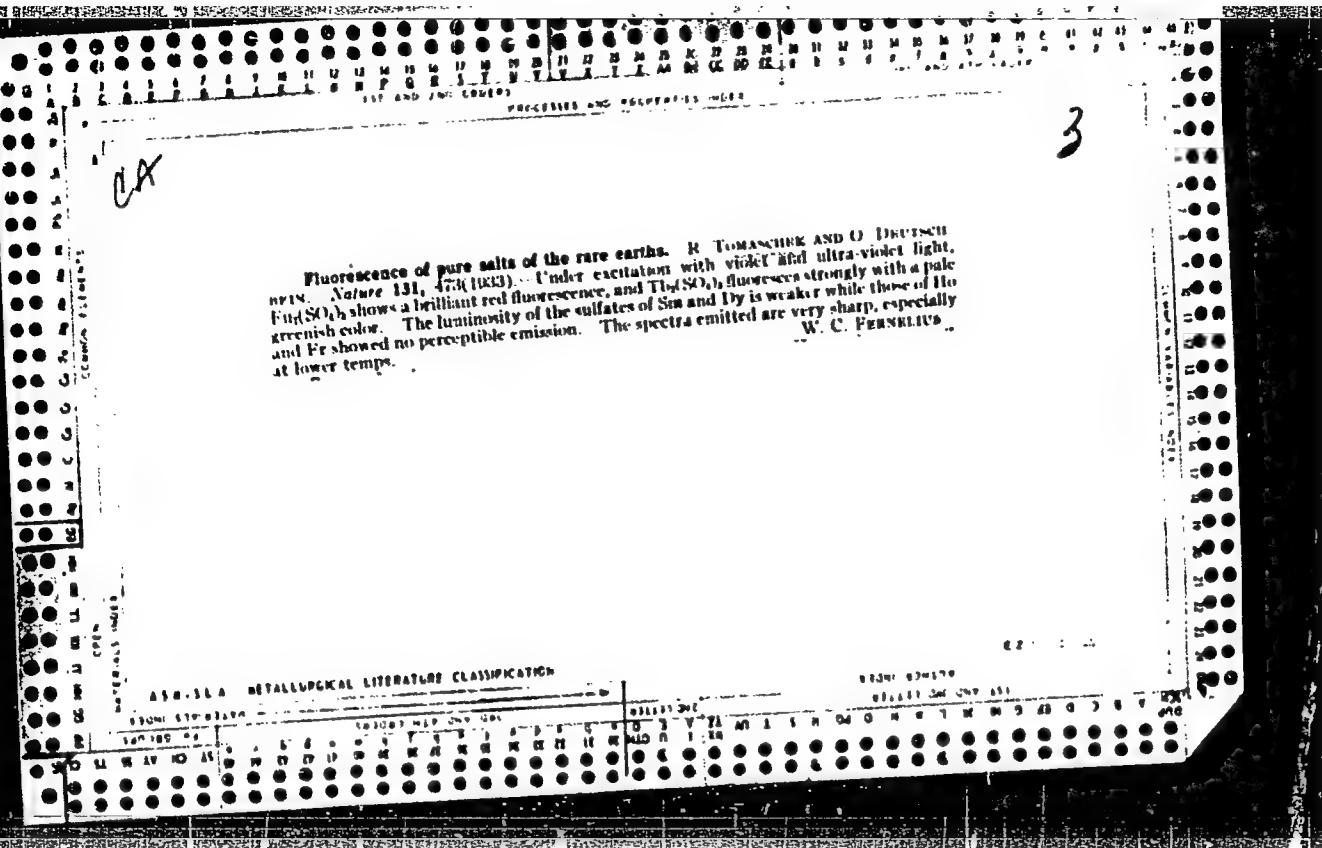
E.

Abs Jour : Ref Zhur - Khimiya, No 9, 1958, 28468

and an aliquot portion is titrated potentiometrically with 0.02 N KMnO_4 . When the first jump in potential is reached, 10 ml of 0.5 N KCN or 10 ml acetone are added to the above solution and the titration with 0.02 N KMnO_4 is continued until the second jump in potential is reached. The addition of CH_3COOH to the solution to be titrated is intended to prevent the volatilization of the I_2 . The authors reject the possibility of the formation of I^+ during the titration and are of the opinion the I_2 reacts with KCN to form ICN and I^- ; when acetone is used, $\text{CH}_3\text{COCH}_2\text{I}$, I^- , and H^+ are assumed to be formed. 1 gm-equiv of KMnO_4 is equivalent to 2 gm-equiv I^- . In the iodometric method the solution to be analyzed is mixed with 25 ml 8 N H_2SO_4 and 50 ml glacial CH_3COOH and the resulting solution is diluted to 100 ml; an aliquot portion is then titrated with a 0.05 N solution.

Card 2/3

52



2047. Leonard Phosphors. B. Ternachek. *Acta Physica Polonica*, 8, pp. 393-406; *Disc.*, 408-416, 1934. In German.—A review of the present position with regard to the phosphorescent spectra emitted by Lenard-phosphors. Specially dealt with are: the relationship between the spectra observed and the atomic term-scheme of the metallic impurity, rare-earth phosphors, and the effect of the lattice-vibrations of the material on spectra emitted. — A. G. M.

A. C. M.

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756210001-8"

TOMASCHEK, R.

Practice and problems of earth tide measurements. Geofiz kozl
9 no.1/2:69 '60.

TOMASCHEK, Zoltan, a muszaki tudomanyok kandidatusa; MAKO, Zoltan; MAGYAR, Laszlo; VAMBERI, Lorinc; KONCZ, Istvan

Properties of the titanium getter and its use in electronic tubes of great specific loading; also, remarks by Z.Mako and others. Muszaki kozl MTA 26 no.1/4:219-220 '60. (EEAI 9:10)

1. Hiradasteknikai Kutato Intezet (for Tomaschek)
(Electron tubes) (Titanium)

LUMASLHEK, Z.

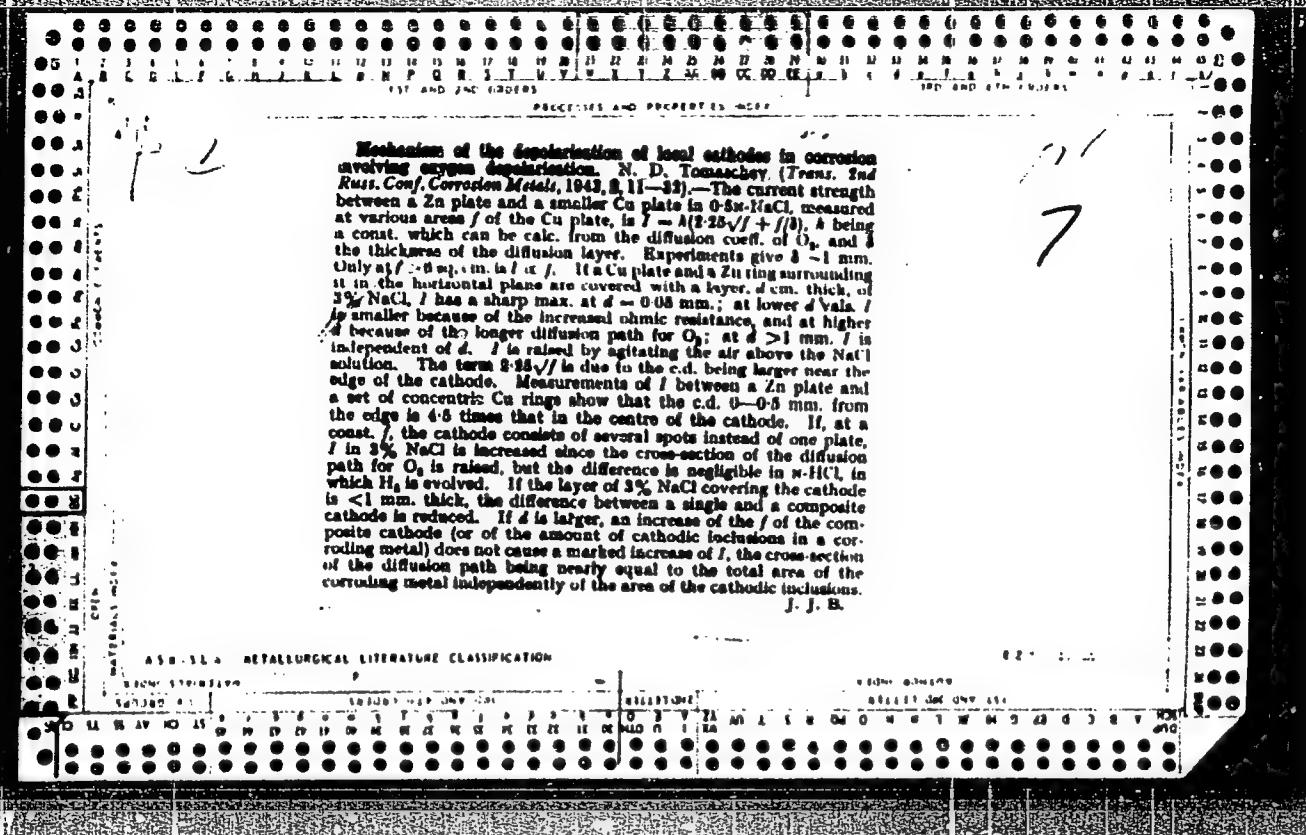
10. The adsorbing properties of compact titanium in vacuum systems at 200 m and 800°C. Thesis for the degree of candidate of sciences. Brno, 1956. 65 figs., 2 tabs.

The adsorbing properties of compact titanium were investigated in an apparatus made entirely of glass, without metal or ground parts. The apparatus consisted of a Pirani vacuum meter for the 10^{-1} to 10^{-3} mm mercury range and an ionization vacuum meter for the range of 10^{-3} to 10^{-6} mm mercury; an electrically heated tube containing the strip of titanium to be investigated and several ampoules containing the pure gases used in the tests and provided with an injector coil. While being heated to 420–450°C the apparatus was evacuated to 10^{-6} mm mercury, sealed and the measurements made in this condition. The experiments were conducted at 800–800°C and at 1000°C. After breaking an ampoule the pressure drop and the time required for reaching a state of equilibrium were measured. When breaking several ampoules the amount of gas added and the time necessary to reach equilibrium were totaled. The graphic representation of the results yields a parabola from the outset for the Ti–N system, for the Ti–O system — until the absorption of about 2.4% by weight of oxygen (solid solution) — a linear function and later, after the formation of an oxide, a parabolic function. The amount of oxygen and nitrogen absorbed was determined and compared with the

results obtained under similar circumstances for compact zirconium; the volume of gases absorbed during a comparable time was considerably greater for titanium. Reaction rates were also computed from the above data showing a higher rate for titanium especially after a certain volume of gases had already been absorbed by the metals. The author determined the parabolic rate constants and from these the energies of activation for the temperature ranges 1000 to 800°C and 800 to 800°C; they show an acceptable agreement with published data. The change in the specific electrical resistance was determined as a function of the temperature and the concentration of oxygen and nitrogen while the change in the specific gravity was established as a function of the concentration of oxygen and nitrogen. Finally it was ascertained that in order to ensure long life for a 20 kW valve with a metallic anode it is necessary to have a strip of titanium of 14 sq. cm surface, weighing approx. 0.2 g. annealed at 800–800°C to fix the nitrogen, oxygen, carbon monoxide and carbon dioxide irreversibly, and a strip of titanium of 0.25 sq. cm surface, weighing approx. 0.007 g. annealed at a temperature not exceeding 400°C to fix the hydrogen reversibly.

TOMASCHEK, Z.

G. FRANK, Mat nat Anz ung Akad Wiss, 1936, 54, 417-431



b: 16.

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Cathodic processes at an iron electrode under conditions of corrosion with oxygen depolarization. N. D. Tymashov (Compt. rend. Acad. Sci. U.R.S.S., 1941, 22, 203-205). Cathodic polarization curves on Fe surfaces supplied with O_2 in a bath at pH ~ 9, show 3 sections corresponding with (1) $O_2 + 4e + 2H_2O \rightarrow 4OH^-$ up to c.d. ~ 1 mA. per sq. cm., (2) control of cathode reaction velocity by diffusion, up to -0.6 v., (3) discharge of H^+ above -0.6 v. An oxidised Fe cathode is less effective than a clean one. Fe_3O_4 is reduced when the potential is < -0.8 v. No H_2O_2 is formed. L. J. J.

N. D. Tomashov

3v. 16a

Graphical method of calculating polyelectrode electrochemical systems as applied to corrosion processes. N. D. Tomashov (Compt. rend. Acad. Sci. U.R.S.S., 1941, 38, 621-623).—Comparison of cathode and anode polarisation curves makes it possible to calculate the work of each separate electrode in a polyelectrode system with any no. of electrodes. The relative surface area of each electrode in the system must be known, and the cathode and anode polarisation curves (c.d. against potential) under conditions close to the working conditions of the system must be plotted for each component of the system separately. The assumption is then made that the effective potentials of all the electrodes of the system become equal as the result of polarisation. This is usually the case if the total ohmic resistance is small. The c.d. potential curves are replotted on a general current-potential diagram. The general potential of the system is the potential at which the sum of all the cathode currents equals the sum of all the anode currents. The curve indicates which electrodes will act as cathodes and which as anodes. In some cases the polarisation curves for the individual electrodes can be calc. but they usually have to be obtained experimentally.

A. J. M.

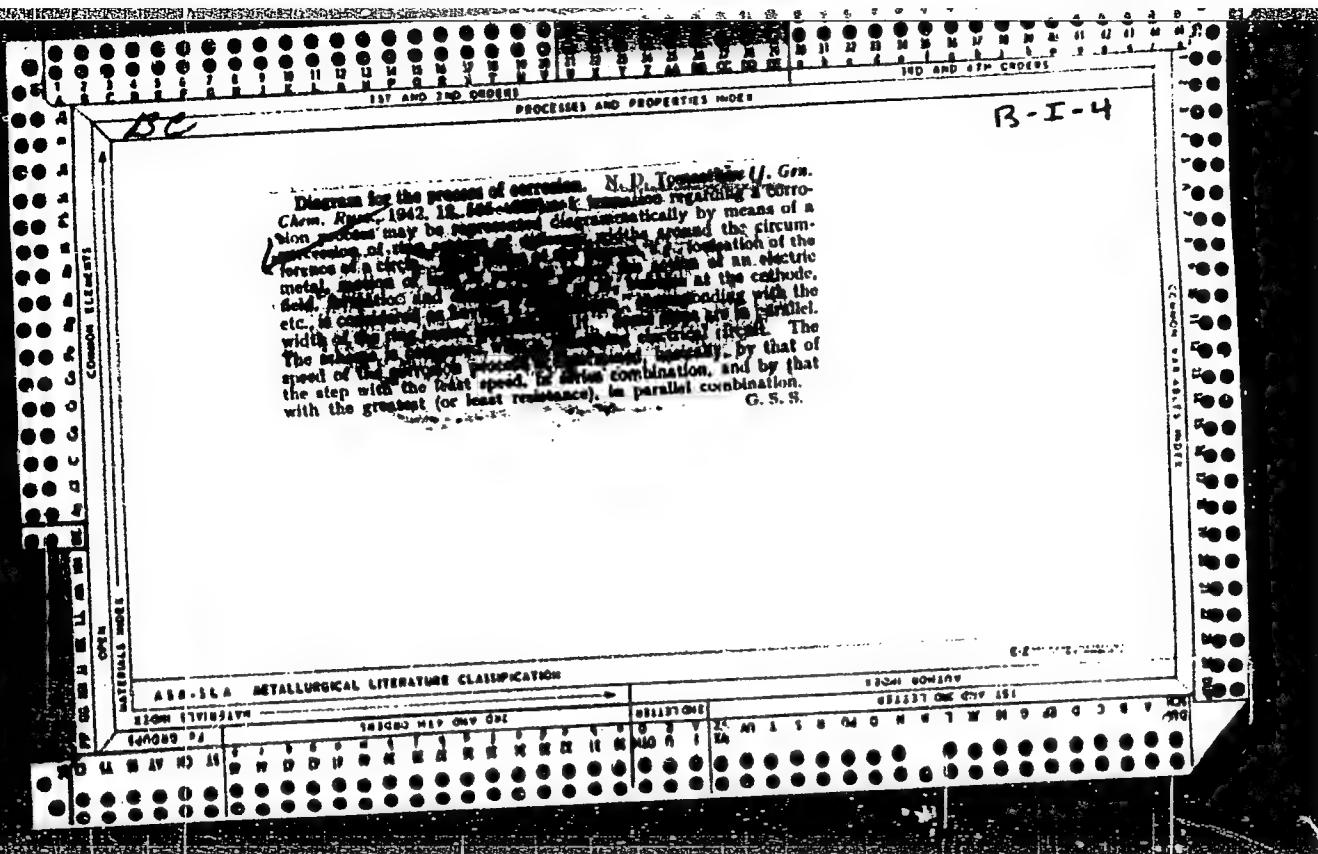
Theory of the Electrochemical Poly-Electrode Systems and Their Application to Corrosion Problems. I.—Potentials in Binary Systems. G. W. Akimov and N. D. Tomaschov (*Zhur. Fizich. Khimii (J. Phys. Chem.)*, 1936, 8, (6), 623-630).—[In Russian.] See abstract from a German source, *Met. Abs.*, 1937, 4, 634.—S. G.

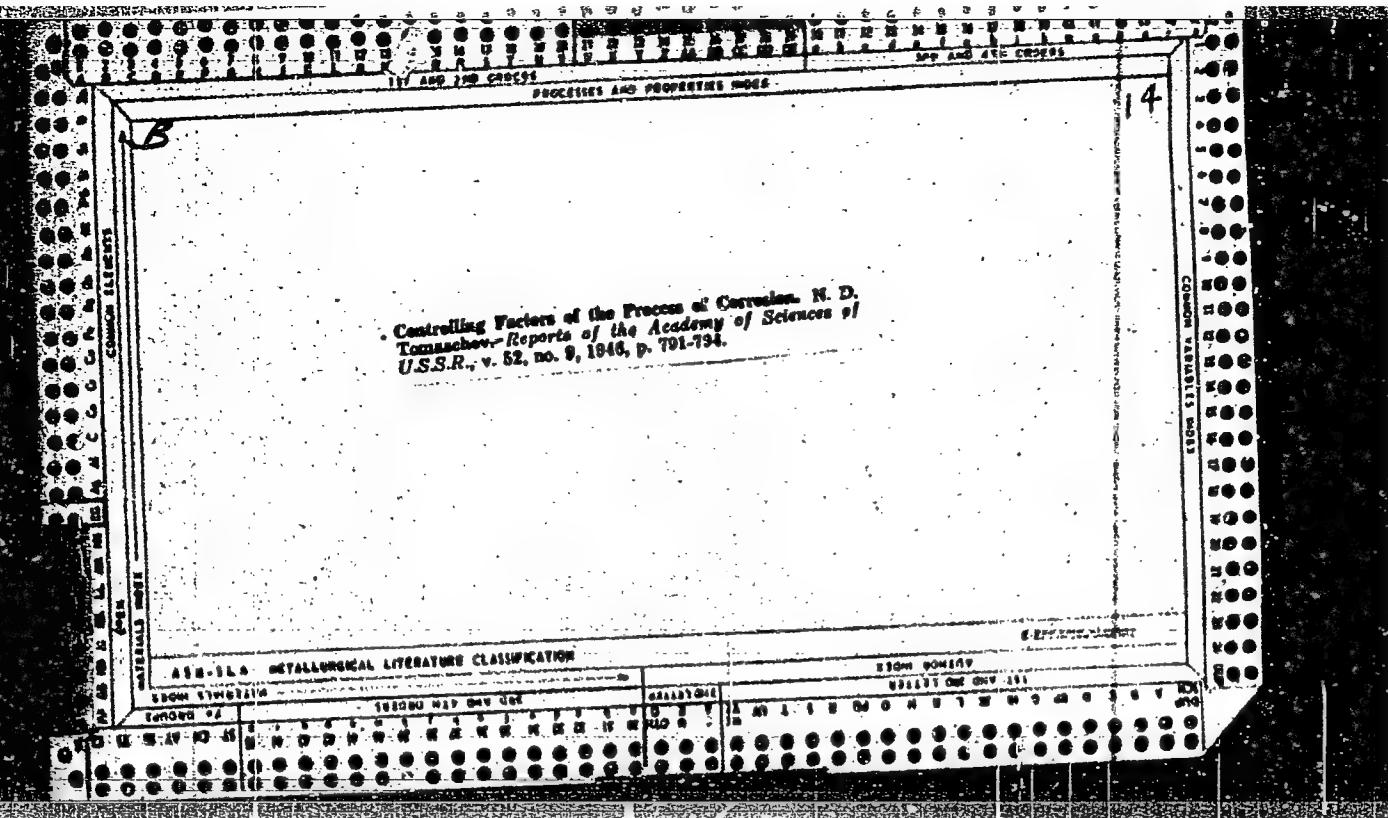
ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

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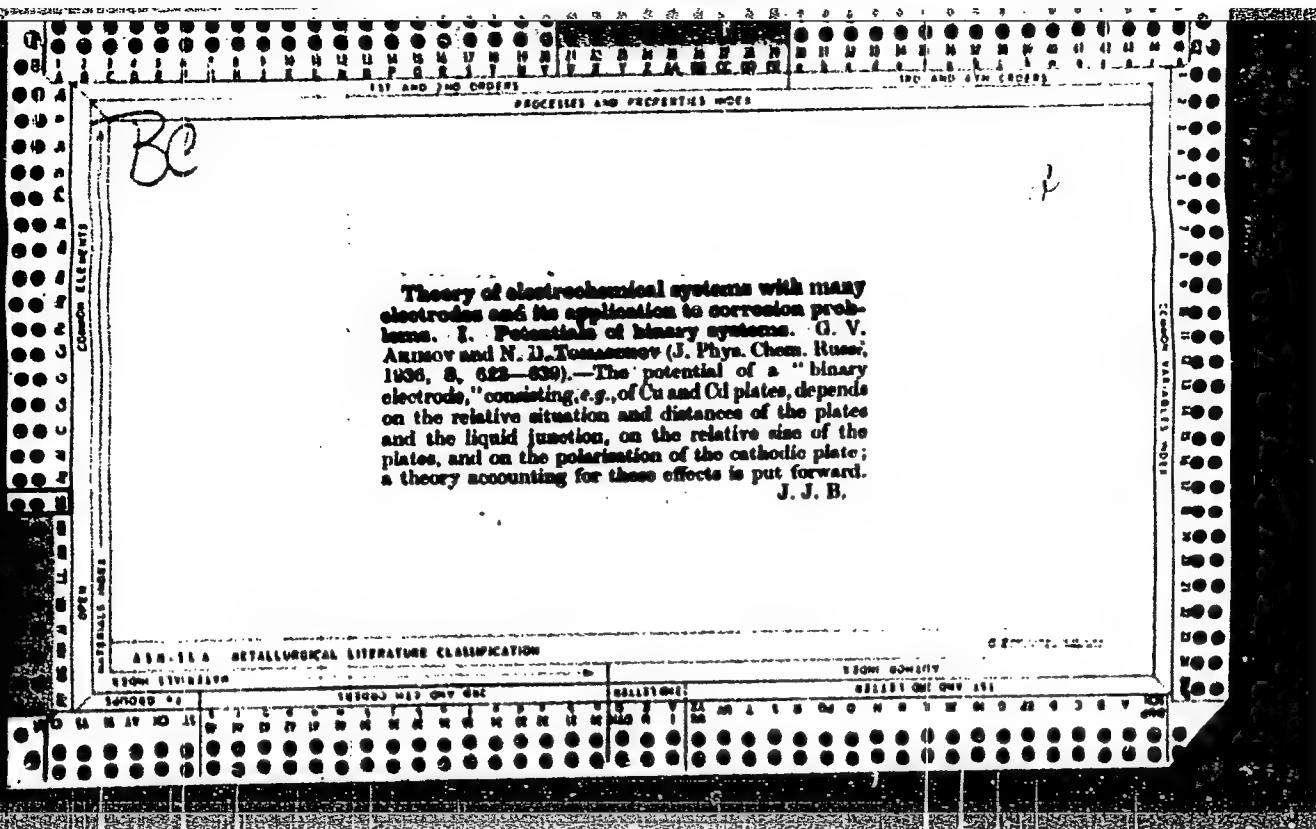
Theory of many-electrode electrochemical systems and its application to corrosion problems. III. Many-electrode galvanic systems. N. D. TOMASCHOV. (J. Phys. Chem. Russ., 1938, 12, 414-428).—The investigation previously described (A., 1938, I, 34) has been extended to include systems of 4 and 5 electrodes. In many-electrode systems inclusion of a new electrode as cathode increases the activity of all the anodes and diminishes that of the cathodes, whilst inclusion of a new anode increases the activity of the cathodes and diminishes that of the anodes. The difference effect (cf. A., 1936, 1474) and the action of protectors both seem to depend on diminution in the activity of local elements on the surface of the metal, as a result of diminished activity of the local cathodes in the first case, and increased activity of the local anodes in the second. R. C.

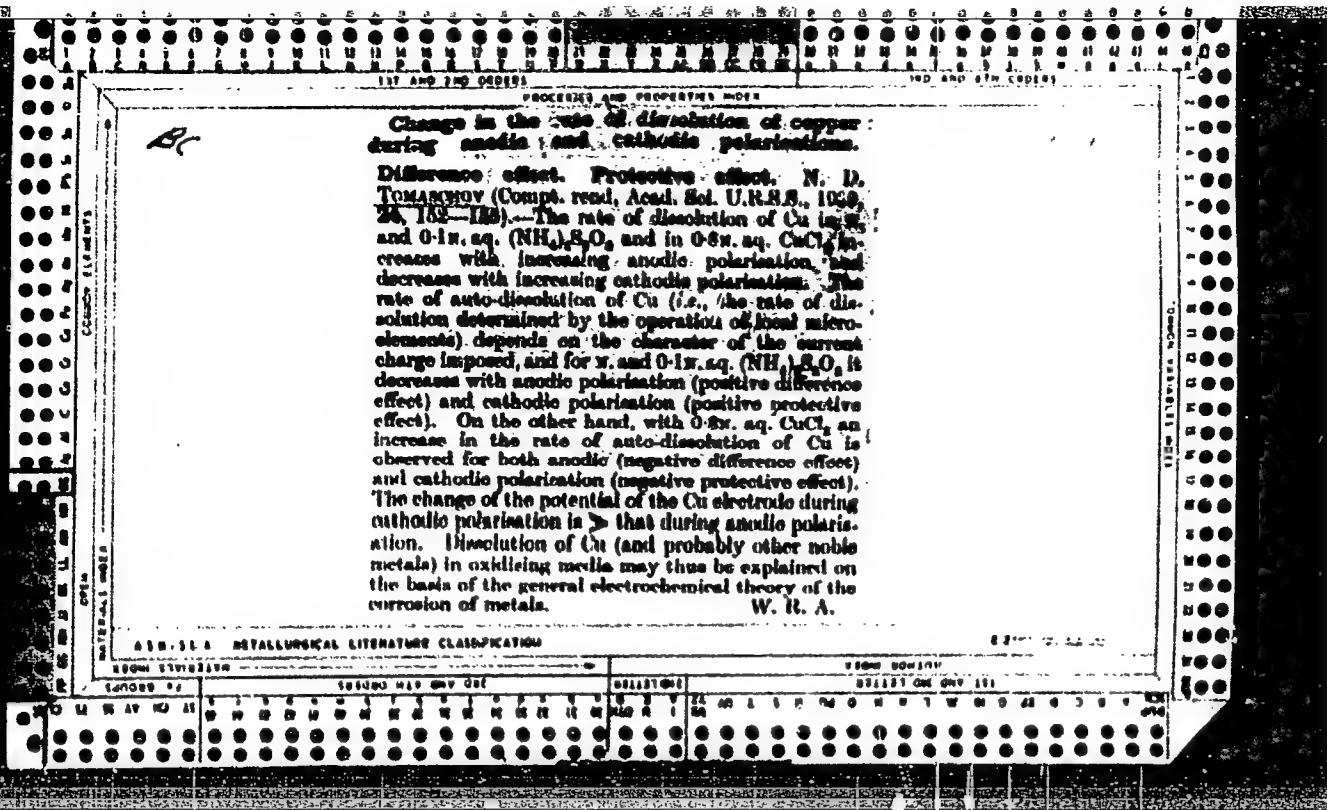
Q-1

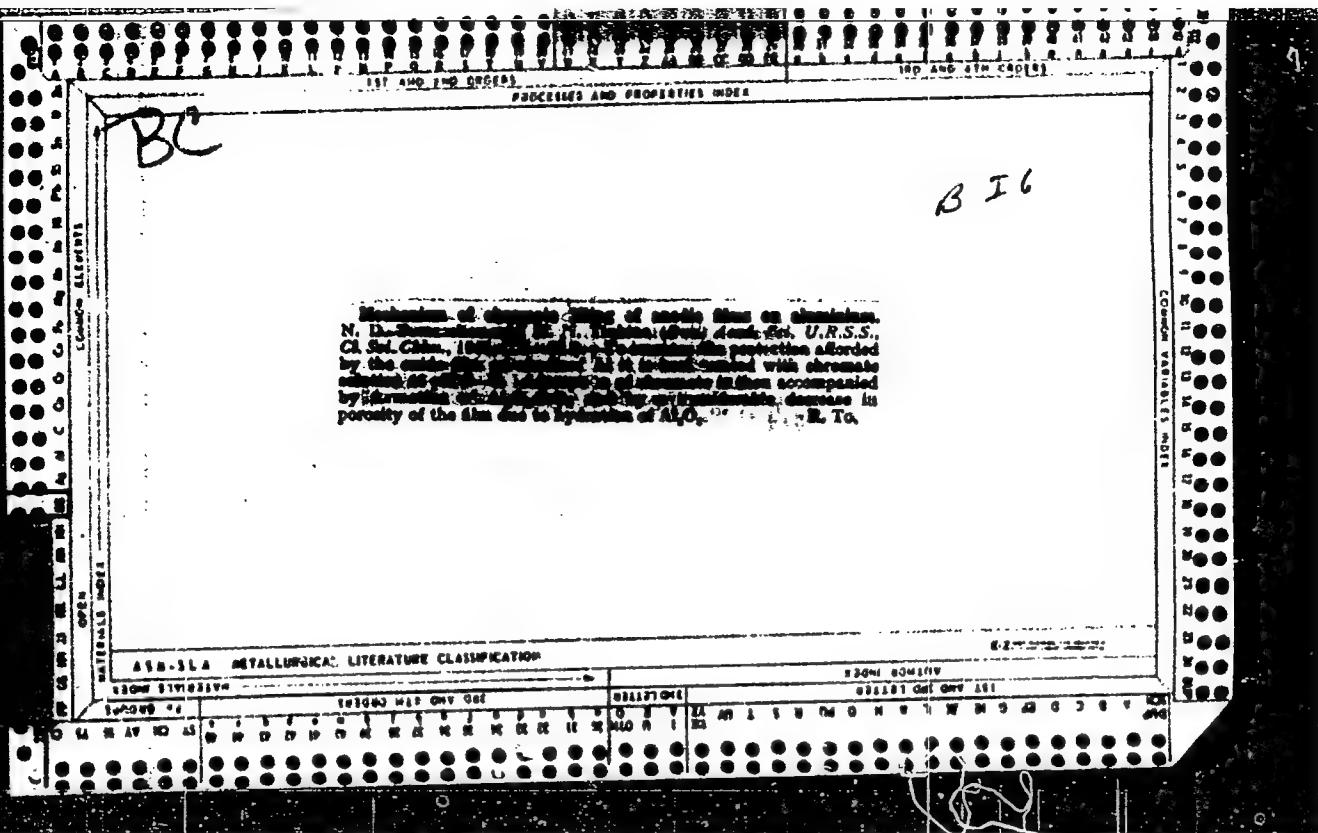
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APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756210001-8"







Mechanism of corrosion of copper in electrolysis. N. D. TOMASOV (Compt. rend. Acad. Sci. U.R.S.S., 1933, 23, 616-622).—The Cu-Pt couple in 3% aq. NaCl acts only in presence of an oxidizing agent (e.g., H_2O_2) at the cathode of the couple, Pt. Addition of H_2O_2 to the Pt compartment shifts the Pt potential in the positive direction to such an extent that dissolution of the Cu in the local element becomes possible. The dissolution of Cu in the couple $Cu|0.1\text{M}-(NH_4)_2SO_4|Pt$ occurs when $(NH_4)_2S_2O_8$ is added to the Pt compartment. Similar results have been obtained with the couple Cu-Pt in HNO_3 , and

Al₂SO₄. These data indicate that the explanation of the mechanism of the dissolution of Cu (and other noble metals) based on a preliminary oxidation is not correct, and that the usual electrochemical theory of corrosion, after a detailed treatment of the processes of cathodic depolarisation, is in more complete agreement with the experimental data. W. R. A.

W. R. A.

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BC

AZ 1

Behaviour of a separate local cathode under conditions of oxygen depolarization. N. D. Tammashay (Cewpa. read. Acad. Sci. U.R.S.S., 1960, 87, 863-864).—On the assumption that the rate-controlling factor in the corrosion of a metal immersed in an aq. solution is the diffusion of O_2 from the surface to the metal (the actual corrosion reaction $e + 1/2 O_2 + 1/2 H_2O \rightarrow OH$ being very rapid), the following expression is deduced for the strength of the local current flowing as a result of the corrosion: $I = A\Delta C D(\sqrt{a/s} - \tan \phi + j_0/d)$, where $A = \text{const.}$, ΔC is the difference of $[O_2]$ between the surface of the solution and that of the metal, D is the diffusion coeff. for O_2 , j_0 is the surface area of the local cathode, ϕ is the angle between the normal to the cathode surface and the generatrix of a cone of which a frustum is contained between the surfaces of solution and cathode (both assumed to be circular) which are at a vertical distance d apart. Theoretical and experimental vals. of I are in good agreement for vals. of d from 0.05 to 0.7 mm., the experimental figures showing negative deviations from the theoretical below 0.05 mm. since the ohmic resistance becomes the controlling factor for this film of solution, and positive ones above 0.7 mm. since convectional as well as diffusional transference of O_2 becomes important. From the theoretical expression it can be deduced that the c.d. at a local cathode will rise rapidly as the edge of the electrode is approached; the relation between the mean c.d. will thus not be directly \propto the area unless this is large but will be the greater the smaller is the area and the greater the perimeter/area ratio.

R. C. M.

Br ab

H. J. V. Guelow

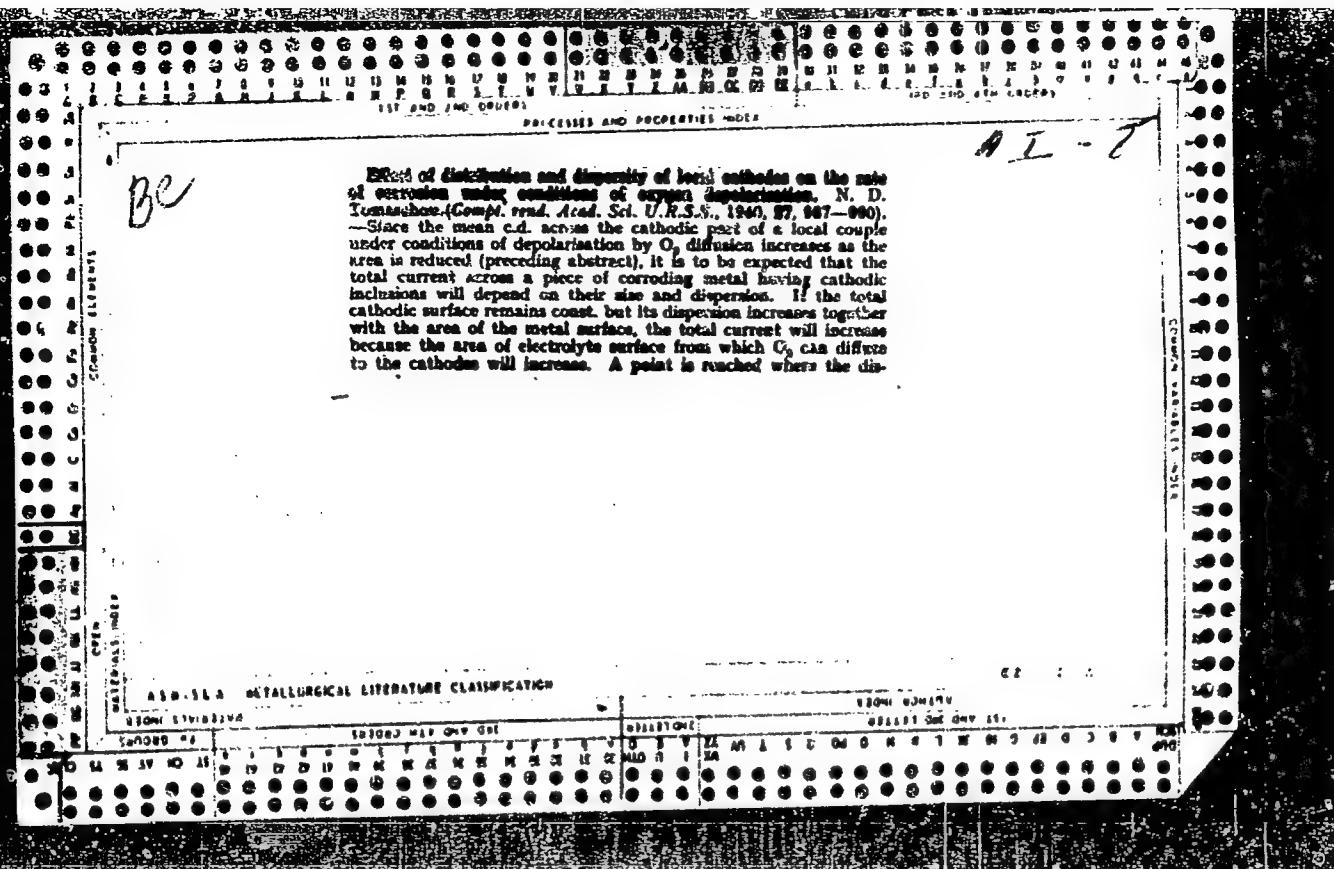
Effect of diffusion and dispersion of local cathodes on the rate of corrosion under conditions of oxygen depolarization. N. D. Topaschov. (Compt. rend. Acad. Sci. U.R.S.S. 1940, 55, 883-886). Since the same c.d. across the cathodic part of a local couple under conditions of depolarization by O_2 diffusion increases as the area is reduced (preceding abstract), it is to be expected that the total current across a piece of corroding metal having cathodic inclusions will depend on their size and dispersion. If the total cathodic surface remains const. but the dispersion increases together with the area of the metal surface, the total current will increase because the area of electrolyte surface from which O_2 can diffuse to the cathodes will increase. A point is reached where the dispersion of the cathodic surface is so great that O_2 streams to the cathodic parts of the mosaic surface no longer overlap, and the total current then remains const. Experimental support for these conclusions has been obtained by measuring the change in total current between $Ca|8\% NaCl|Zn$ couples when the operating area of the Ca was kept const. whilst the area of the mosaic in which it was located was decreased. R. C. M.

Rev. 1st.

H. H. [unclear]

Behaviour of a porous local cathode under conditions of oxygen supersaturation. M. D. Tammann (Czech. Acad. Sci. U.R.S.S., 1940, 87, 903-936).—On the assumption that the rate-controlling factor in the corrosion of a metal immersed in an eq. solution is the diffusion of O_2 from the surface to the metal (the actual corrosion reaction $4 + 10 + 1H_2O + OH$ being very rapid), the following expression is deduced for the strength of the local current flowing as a result of the corrosion: $I = \pi ACD(\sqrt{a_2} - \tan \phi + f_0/4)$, where $\pi = \text{const}$, A is the difference of $[O_2]$ between the surface of the solution and that of the metal, D is the diffusion coeff. for O_2 , a_2 is the surface area of the local cathode, ϕ is the angle between the normal to the cathode surface and the generatrix of a cone of which a frustum is contained between the surfaces of solution and cathode (both assumed to be circular) which are at a vertical distance d apart. Theoretical and experimental val. of I are in good agreement for val. of d from 0.68 to 0.7 mm., the experimental figures showing negative deviations from the theoretical below 0.68 mm. since the ohmic resistance becomes the controlling factor for thin films of solution, and positive ones above 0.7 mm. since convectional as well as diffusional transference of O_2 becomes important. From the theoretical expression it can be deduced that the c.d. at a local cathode will rise rapidly as the edge of the electrodes is approached; the relation between the mean c.d. will thus not be directly \propto the area unless this is large but will be the greater the smaller is the area and the greater the perimeter/area ratio.

R. C. M.



Bv. Abs.

28 I - 21 - metal. metallurgy, etc.

Cathodic processes in metallic corrosion. N. D. Torgashov
(*Compt. rend. Acad. Sci. U.R.S.S.*, 1948, **50**, 791-794). An
analysis of theoretical curves of cathodic polarization in metallic
corrosion is presented. The location of crit. points on the curves
and the characteristic features at and between these points are
arranged in tabular form.

WC

R-1

Theory of many-electrode electrochemical systems and its application to corrosion problems. II. Three-electrode galvanic systems. N. D. ТОМАСКИН. (J. Phys. Chem. Russ., 1937, 9, 43-63).—A Cd electrode was immersed in an electrolyte between a Pt anode and a Zn cathode and connected to various parts of the external circuit. Direction and strength of the current in the intermediate electrode were determined in relation to its position in the liquid, to the resistances of the external circuit on both sides of the branching, and to the conditions of electrolysis. E. R.

BC

1971. Mechanism of anodic oxidation of aluminum in sulphuric acid. G. V. Akimov, M. I. Tsvetkov, and M. N. Tsvetina (*J. Gen. Chem. Russ.*, 1948, 18, 333-348).—For assessing the quality of an anode film on Al, a drop of solution containing $NiCl_2 \cdot 6H_2O$, 3 g. (10%) (4:1:16) 2 ml., and water 18 ml. is placed on the clean anodized surface (*i.e.*, not sealed with Al_2O_3) and the time of commencement of deposition of a green tint is noted. This time is a measure of the thickness of the film: *e.g.*, under normal anodizing conditions (20% H_2SO_4 , 20°, 1 amp. per dm.²) 15 min. corresponds with $\sim 8 \mu$. (See also B., 1946, 7, 102.)

U. S. S.

150

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B-I-4

~-5 μ) are wasted of electricity. The decrease in resistance as the film becomes thicker is explained by increasing porosity and consequent greater accessibility for ions. Although the potential of ordinary electrodeposited Al in 5% NaCl is more positive than that of pure Al, yet electrode Al becomes more negative when the film is thicker. If measurements are made immediately after immersion in NaCl, showing a progressive rise in porosity. On the other hand, after 60 min., or more, the NaCl potential tends to be more positive, the longer is the immersion, indicating penetration of NaCl, by diffusion and, to become electrically conductive, by hydrolysis or dissolution. An attempt to explain voltage decrease in terms of the electrical resistance of the film. Examination of previous films shows that they consist of a thin, dense film next to the metal, consisting of Mordby hydroxide, $Al(OH)_3$, and a thick porous layer of hydrated Al in particles, the porosity of which is apparently caused by the loss of adsorbed water, probably through desorption kinetics. The resistance of the porous aluminum hydroxide, can not be determined from the earlier test, which may be caused by the fact that the resistance of the film (0.0001 to 0.0004 ohm) is to the resistance of the glass, suggested by Mott (A., 1930, 1, 616; 1940, 1, 100), is so small that it is easily differentiated into a porous film by the added acidic electrolyte from the oxide. (See also C., 1944, Part 2.)

Fig. 9

ASH-124 METALLURGICAL LITERATURE CLASSIFICATION

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YUGOSLAVIA

Ivo TOMASEC [Affiliation not given.]

"The European Symposium on Diseases of Fish and Market Controls."

Belgrade, Veterinarski Glasnik, Vol 17, No 4, 1963; pp 386-389.

Abstract Report about this 5-day meeting held in Turin in Italy in October 1962. Resolutions about certain diseases of edible fish and about recommended inspection practices are given in considerable detail.

1/1

Treatment of Kuru disease with alpha-1-antitrypsin
In November 1981, 20 squirrel monkeys were used to test the effect of 15 different alpha-1-antitrypsin on the development of Kuru after the inoculation of the brain with the virus. Some were suitable for treatment of the disease, although some had fully entered its development.

YUGOSLAVIA/Farm Animals - Honey Bee.

Q-4

Abs Jour : Ref Zhur - Biol., No 1, 1959, 2767

Author : Tomsic, I.

Inst : -

Title : Effect of Certain Antibiotics on Bees.

Orig Pub : Veterin. arb., 1957, 27, No 3-4, 71-80.

Abstract : Terramycin (T), streptomycin (S) and penicillin (P) in sugar syrup (1:1) were fed to healthy bees taken from colonies and also to bees settled in groups of 20 to 100, each inside little cell, at room temperature or at thermostatically controlled temperature of 30°. As compared with the control bees the greatest prolongation of life-span, improvement in the development of the brood, and increase of the honey yield to approximately double the normal, were obtained by applying S (0.25-0.5 grams per bee colony). The effect of P (200,000 units per colony)

Card 1/3

- 50 -

YUGOSLAVIA/Farm Animals - Honey Bee.

Abs Jour : Ned Akar - Biol., No 1, 1951, 237

was less extensive, and inconstant; in some families the development of brood and the construction of the honeycomb were improved. As for families fed with T for 20-30 days, observations showed merely an improvement in the development of the brood. In experiments with daged bees, the antibiotics had a weaker and less regular effect, although the bees given P did live somewhat longer than the control bees. The antibiotics exerted no effect on the development of salivary glands and the regeneration of the epithelial cells of the midgut. They modified appreciably the intestinal flora. Feeding with T was followed by the disappearance of the normal flora and by an intense development of yeast. Feeding with S was followed by the disappearance of minute bacteria, especially Fact. curvilinea, while feeding with P was followed by an intense proliferation of cocci and "pluton" forms.

Card 2/3

YUGOSLAVIA/Farm Animals - Honey Bee.

Q-4

Abs Jour : Ref Zbir - Biol., No 1, 1950, 2767

It is probable that the indiffused flora affects metabolism and possibly also the enzyme system. -- V.A. Konyukh

Card 3/3

- 51 -

TOMASEC, Ivo, dr., prof. (Zagreb, Derencinova 24)

Investigation of the etiology of the European putrefaction of the
bee larvae. Ljetopis JAZU 64:340-342 '57 (publ.'60).

1. Veterinarski fakultet Sveucilista u Zagrebu; clan dopisnik u
radnom sastavu Jugoslavenske akademije znanosti i umjetnosti.

TOMASHEGOVIC, Zdenko, prof. dr

Development of photointerpretation. Geod list 17 no.1/3:59-64
Ja-Mr '63.

1. Sumarski fakultet, Zagreb, Maksimir.

TOMASEGOVIC, Z.; JANKOVIC, Z.; PETKOVIC, V.; STANIC, M.; EETLHEIM, S.; BLAZEVIC, D.; PERSIC, N.; ZORINC, S.; TEODOROVIC, B.; VRANCIC, J.; VODOPIJA, I.; ANTONIAZZO, Z.; CULIC, R.; GALINOVIC-WEIEGLASS, M.; ~~REZNOV~~, B.; MRAVUNAC, B.; KOEHLER-KUBELKA, N.; CEZNER, M.; KOHN, V.; TEKAVCIC, B.; EMILI, H.; SMERDEL, S.; SOOS, E.; VUKSANOVIC, V.; JANJATOVIC, M.; DERVISEVIC, I.; GRUENWALD, P.; SKRABALO, Z.; CREPINKO, I.; HAUPTMANN, E.; VIDACEK, S.; HORVAT, A.; MIOCKA, O.; IVANCEVIC, D.; PERGER, A.; KRSNJAVA, B.; PRAZIC, M.; SALAJ, B.; SUBOTIC, R.; RADOSEVIC, Z.; KELER-BACOKA, M.; HAHN, A.; MATKOVIC, B.; RADONIC, M.

Review of periodicals; medicine. Bul sc Youg 9 no.4/5:145-147
Ag-0 '64.

TOMASEGOVIC, Zdenko, dr (Zagreb)

Constant maintenance of cadastral plans in the mountainous forest areas. Geod list 17 no.10/12:328-332 0-B'63.

TOMASEGOVIC, Zdenko, prof. dr.

Determination of supplementary points by photogrammetric methods.
Geod list 16. no.10/12:317-320 0-D '62.

1. Sumarski fakultet, Zagreb - Maksimir.

TOMASEGOVIC, Z.

A conference of Yugoslav geodetic experts on land surveying by aerial photogrammetry. p. 130.

(GLASNIK, Vol. 80, No. 3/4, Mar./Apr. 1956

SO: Monthly List of East European Accessions (EEAL) LC Vol. 6, No. 12, Dec. 1957
Uncl.

TOMASEGOVIC, Z.

Yugoslavia (430)

Agriculture-Plant and Animal Industry

Photogrammetry in forestry. p. 193.
SUMARSKI LIST. Vol 75, no. 5, May 1951.

East European Accessions List. Library of
Congress. Vol 2, no. 3, March 1953. UNCLASSIFIED

TOMASEGOVIC, Z.

"A new contribution to the problem of determining the differences of coordinates in polygon trades", p. 49. "Geodetic service in Bosnia and Herzegovina in 1952", p. 62, (Geodetski List, Vol. 7, no. 1/4, Jan./Apr. 1953, Zagreb)

SO: Monthly List of East European Russian Accessions, Vol. 2, No. 9, Library of Congress, September 1953, Unclassified.

TOMASEK, A.

Tomasek, A. Labor safety at hydraulic presses. p. 101. HUTNIK. Praha.
Vol. 5, no. 4, Apr. 1955.

SO: Monthly List of the East European Accession, (EEAL), LC. Vol. 4,
no. 10, Oct. 1955. Uncl.

S.C.L.

*f. Vulcanized natural
rubber*

Vibrations of machine foundations. A. TROJASZEK
Prace Nauk. (Kiev, 1946, 26, 215-8, 231-3; Engi-
neering Digest, 1947, 8, 91-4; Building Sci. Adv.,
1947, 20, 300). A mathematical treatment of the
different types of oscillation likely to arise in
foundations supporting heavy machinery is followed
by the application of the data so obtained to the
design of suitable foundations. The main criteria
governing correct design are given. Soft or rein-
forced rock seatings are cheapest, but have low
compressive strength. Rubber seatings are strong
and have considerable damping capacity, but show
low elasticity values for static or alternating loading;
rubber may be vulcanized or bonded to metal
substrates. *AM212320.312*

1948

NOVY, Ludvik; TOMASEK, Frantisek

Determining the kaolin grain size by Cassagrande densimetric method.
Silikaty 7 no.2:159-167 '63.

1. Ustav technologie hrube keramiky a upravnictvi keramickych surovin.

TOMASEK, J. HILGERT, L.

Two-phase generator with slow oscillations. p. 69.

(Sdelovaci Technika. Vol. 5, no. 3, Mar. 1957. Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 10, October 1957. Uncl.

SEDLAK, Jan, inz.; SEDMIDUBSKY, Zd., inz.; TOMASEK, Jar., inz.

Characteristics of calculating machines. Automatizace 5
no.5:144-145 My '62.

TOMASEK, J.

"Continuous production of feeding yeast" by [akademik] I. Malek,
J. Barta, K. Beran, A. Brozaj, Z. Fencl, V. Gregr, K. Hauser, J. Hospodka,
P. Rach. Reviewed by J. Tomasek. Kvasny prum 9 no.3:68-69 Mr '63.